- (3) Hangar and tie-down costs away from the aircraft's base of operation.
- (4) Insurance obtained for the specific flight.
- (5) Landing fees, airport taxes, and similar assessments.
- (6) Customs, foreign permit, and similar fees directly related to the flight.
  - (7) In flight food and beverages.
  - (8) Passenger ground transportation.
- (9) Flight planning and weather contract services.
- (10) An additional charge equal to 100 percent of the expenses listed in paragraph (d)(1) of this section.

[Doc. No. 18334, 54 FR 34314, Aug. 18, 1989, as amended by Amdt. 91–280, 68 FR 54560, Sept. 17, 2003]

## §91.503 Flying equipment and operating information.

- (a) The pilot in command of an airplane shall ensure that the following flying equipment and aeronautical charts and data, in current and appropriate form, are accessible for each flight at the pilot station of the airplane:
- (1) A flashlight having at least two size "D" cells, or the equivalent, that is in good working order.
- (2) A cockpit checklist containing the procedures required by paragraph (b) of this section.
  - (3) Pertinent aeronautical charts.
- (4) For IFR, VFR over-the-top, or night operations, each pertinent navigational en route, terminal area, and approach and letdown chart.
- (5) In the case of multiengine airplanes, one-engine inoperative climb performance data.
- (b) Each cockpit checklist must contain the following procedures and shall be used by the flight crewmembers when operating the airplane:
  - (1) Before starting engines.
  - (2) Before takeoff.
  - (3) Cruise.
  - (4) Before landing.
  - (5) After landing.
  - (6) Stopping engines.
  - (7) Emergencies.
- (c) Each emergency cockpit checklist procedure required by paragraph (b)(7) of this section must contain the following procedures, as appropriate:

- (1) Emergency operation of fuel, hydraulic, electrical, and mechanical systems.
- (2) Emergency operation of instruments and controls.
  - (3) Engine inoperative procedures.
- (4) Any other procedures necessary for safety.
- (d) The equipment, charts, and data prescribed in this section shall be used by the pilot in command and other members of the flight crew, when pertinent.

# § 91.505 Familiarity with operating limitations and emergency equipment

- (a) Each pilot in command of an airplane shall, before beginning a flight, become familiar with the Airplane Flight Manual for that airplane, if one is required, and with any placards, listings, instrument markings, or any combination thereof, containing each operating limitation prescribed for that airplane by the Administrator, including those specified in §91.9(b).
- (b) Each required member of the crew shall, before beginning a flight, become familiar with the emergency equipment installed on the airplane to which that crewmember is assigned and with the procedures to be followed for the use of that equipment in an emergency situation.

#### § 91.507 Equipment requirements: Over-the-top or night VFR operations.

No person may operate an airplane over-the-top or at night under VFR unless that airplane is equipped with the instruments and equipment required for IFR operations under §91.205(d) and one electric landing light for night operations. Each required instrument and item of equipment must be in operable condition.

# §91.509 Survival equipment for overwater operations.

(a) No person may take off an airplane for a flight over water more than 50 nautical miles from the nearest shore unless that airplane is equipped with a life preserver or an approved flotation means for each occupant of the airplane.

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- (b) Except as provided in paragraph (c) of this section, no person may take off an airplane for flight over water more than 30 minutes flying time or 100 nautical miles from the nearest shore, whichever is less, unless it has on board the following survival equipment:
- (1) A life preserver, equipped with an approved survivor locator light, for each occupant of the airplane.
- (2) Enough liferafts (each equipped with an approved survival locator light) of a rated capacity and buoyancy to accommodate the occupants of the airplane.
- (3) At least one pyrotechnic signaling device for each liferaft.
- (4) One self-buoyant, water-resistant, portable emergency radio signaling device that is capable of transmission on the appropriate emergency frequency or frequencies and not dependent upon the airplane power supply.
- (5) A lifeline stored in accordance with  $\S 25.1411(g)$  of this chapter.
- (c) A fractional ownership program manager under subpart K of this part may apply for a deviation from paragraphs (b)(2) through (5) of this section for a particular over water operation or the Administrator may amend the management specifications to require the carriage of all or any specific items of the equipment listed in paragraphs (b)(2) through (5) of this section.
- (d) The required life rafts, life preservers, and signaling devices must be installed in conspicuously marked locations and easily accessible in the event of a ditching without appreciable time for preparatory procedures.
- (e) A survival kit, appropriately equipped for the route to be flown, must be attached to each required life raft.
- (f) As used in this section, the term shore means that area of the land adjacent to the water that is above the high water mark and excludes land areas that are intermittently under water.

[Doc. No. 18334, 54 FR 34314, Aug. 18, 1989, as amended by Amdt. 91–280, 68 FR 54561, Sept. 17, 2003]

### § 91.511 Radio equipment for overwater operations.

- (a) Except as provided in paragraphs (c), (d), and (f) of this section, no person may take off an airplane for a flight over water more than 30 minutes flying time or 100 nautical miles from the nearest shore unless it has at least the following operable equipment:
- (1) Radio communication equipment appropriate to the facilities to be used and able to transmit to, and receive from, any place on the route, at least one surface facility:
  - (i) Two transmitters.
  - (ii) Two microphones.
- (iii) Two headsets or one headset and one speaker.
  - (iv) Two independent receivers.
- (2) Appropriate electronic navigational equipment consisting of at least two independent electronic navigation units capable of providing the pilot with the information necessary to navigate the airplane within the airspace assigned by air traffic control. However, a receiver that can receive both communications and required navigational signals may be used in place of a separate communications receiver and a separate navigational signal receiver or unit.
- (b) For the purposes of paragraphs (a)(1)(iv) and (a)(2) of this section, a receiver or electronic navigation unit is independent if the function of any part of it does not depend on the functioning of any part of another receiver or electronic navigation unit.
- (c) Notwithstanding the provisions of paragraph (a) of this section, a person may operate an airplane on which no passengers are carried from a place where repairs or replacement cannot be made to a place where they can be made, if not more than one of each of the dual items of radio communication and navigational equipment specified in paragraphs (a)(1) (i) through (iv) and (a)(2) of this section malfunctions or becomes inoperative.
- (d) Notwithstanding the provisions of paragraph (a) of this section, when both VHF and HF communications equipment are required for the route and the airplane has two VHF transmitters and two VHF receivers for